



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,962	12/09/2003	Chandra Kumar Banerjee	00568-290996	3681

7590 10/09/2007
Charles W. Calkins, Esq.
Kilpatrick Stockton LLP
1001 West Fourth Street
Winston-Salem, NC 27101-2400

EXAMINER

NGUYEN, PHU HOANG

ART UNIT	PAPER NUMBER
----------	--------------

1791

MAIL DATE	DELIVERY MODE
-----------	---------------

10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/730,962	Applicant(s) BANERJEE ET AL.	
	Examiner Phu H. Nguyen	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-9 and 12-34 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 12-18 and 23-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1731

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4, 6, 8-9 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Li et al. (U.S. Publication No. 2003/0131859 A1).

Regarding claim 4, Li discloses a smoking article comprising:

a rod of aerosol generating material,

a filter element coupled to first end of the rod,

at least one catalyst composition comprising ultrafine particles

the catalyst (Fe_2O_3) converts carbon monoxide to carbon dioxide below 150°C. (Abstract, paragraph 55 and paragraph 85) evidence by Reddy et al. (U.S. Publication No. 2005/0263164 A1) that teaches Fe_2O_3 can adsorb carbon monoxide (paragraph 26) making adsorption an inherent in the prior art.

catalyst is added to the filter for reducing the concentration of carbon monoxide reaching the smoker (paragraph 4).

Regarding claim 6, Li discloses tobacco smoke filter has activated carbon since it is a preferred material for the sobernt granules (paragraph 4).

Regarding claim 8, Li discloses the catalyst composition is additionally disposed within the rod of aerosol generating material (paragraph 85).

Regarding claim 9, Li discloses the smoking article comprises a heat source (paragraph 85).

Regarding claim 12, Li discloses the composition comprises a plurality of ultrafine particles positioned on a substrate (tobacco) (paragraph 84).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7 and 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haruta et al. (U.S Patent No. 5789337) in view of Duke et al. (U.S Patent No. 5657772) and further in view of Li et al. (U.S Publication No. 2003/0131859 A1).

Regarding claims 1-3 and 25-26, Haruta discloses a metal oxide substrate and ultrafine gold particles. However, Haruta does not expressly disclose that the substrate has an average diameter ranging from 0.05 mm to 2 mm. Duke discloses the substrate for deposition of gold, platinum, copper, silver, tin or other suitable metal can be granular substrate (column 1, line 61 to column 2, line 10) and granular sizes may range from less than 0.5 mm to over 3 mm (column 3, lines 3-4) (overlapping the ranges of the instant claim 1). Li discloses that

Art Unit: 1731

activated carbon is the preferred material for the sorbent granules, it is said that metal oxides can be used instead (paragraph 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a metal oxide of the granular substrate type as taught by Duke to deposit ultrafine gold particles with a desired granular size.

Regarding claim 7, Duke discloses activated carbon (corresponding to the claimed "adsorbent material") is used in a filter for a smoking article (abstract).

Regarding claims 27, 29-30 and 33-34, the combination of Haruta and Duke discloses a smoking article comprising:

- a rod comprising tobacco;
- a filter element coupled to a first end of the rod.

Li discloses that metal oxides substrate can be used in addition with activated carbon (corresponding to the claimed "particulate carbon") in a tobacco smoke filter. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the catalyst in combination with particulate carbon in the filter.

Regarding claim 28, Li discloses that particulate carbon can be used with the catalyst in combination, therefore it would be obvious to one of ordinary skill in the art to expect at least 1 weight percentage of the particulate carbon in the combination.

Regarding claim 31, Haruta discloses a plurality of ultrafine gold (a noble metal) particles are positioned on a substrate (abstract) where in the substrate is alumina (column 2, lines 55-67).

Art Unit: 1731

Regarding claim 32, Li discloses the particles have a size preferably less than about 100 nm (paragraph 15).

Claims 12-18 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. (U.S. Publication No. 2003/0131859 A1) in view of the combination of Haruta et al. (U.S. Patent No. 5789337) and Duke et al. (U.S. Patent No. 5657772). The combination of Haruta and Duke discloses what Li does not expressly disclose.

Regarding claims 12-15, Haruta discloses a plurality of ultrafine gold (a noble metal) particles are positioned on a substrate (abstract) where in the substrate is alumina (column 2, lines 55-67).

Regarding claims 16-18, Haruta discloses the noble metal has an average particle size between 2 nm and 4 nm (column 2, lines 45-60).

Regarding claims 23-24, (see treatment of claims 1-3 and 12-18).

Response to Arguments

Applicant's arguments filed 7/18/2007 have been fully considered but they are not persuasive.

Applicant essentially argues that Li (U.S. Publication No. 2005/0121044) provides catalyst composition in the cut filler of the smoking article rather than in the filter. The Examiner points out on paragraph 4, Li discloses the adding catalyst to the filter for reducing the concentration of carbon monoxide reaching the smoker. Therefore, Li discloses the catalyst in the filter not just in the cut filler of the smoking article.

Art Unit: 1731

Applicant's arguments with respect to claims 1-3, 12-18, 23-24 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu H. Nguyen whose telephone number is 571-272-5931. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.N 9/28/2007


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700